

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	18941	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L2	22	split\$4 same combiner same electrode same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L3	9	L1 and L2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L4	2397	split\$4 same combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L5	2206	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L6	2904	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L7	1	(L4 and L5 and L6) not L3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L8	4589	combiner same ("MZ interferometer"	US-PGPUB;	OR	ON	2011/11/17

		mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			22:53
L9	2	(L5 and L6 and L8) not (L3 L7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L10	1602605	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L11	13	L2 not (L9 L3 L7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L12	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L13	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L14	704	Franz-Keldysh	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L15	466	L10 and L14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L16	161	L1 and L15	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2011/11/17 22:53

			IBM_TDB			
L17	1	L5 and L6 and L16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L18	20	(L9 L3 L7 L11 L12 L13) and (phase adj shift\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L19	737	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L20	3	L18 and L19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L21	5208	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 (silicon near5 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L22	18941	((359/245,315,247,251- 252,254,108,237-238,278-279,290- 292,298,300-302) or (385/1-3,40,129- 132,5,8-9)).OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L23	22	split\$4 same combiner same electrode same ("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L24	9	L22 and L23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L25	2397	split\$4 same combiner same ("MZ interferometer" mach-zender mach- zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2011/11/17 22:53

		adj guide) (modulat\$5 adj (branch arm path)))	EPO; JPO; DERWENT; IBM_TDB			
L26	2206	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L27	2904	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L28	1	(L25 and L26 and L27) not L24	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L29	4589	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L30	2	(L26 and L27 and L29) not (L24 L28)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L31	13	L23 not (L30 L24 L28)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L32	6	(("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L33	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L34	1	(L30 L24 L28 L31 L32 L33) and L21	US-PGPUB; USPAT;	OR	ON	2011/11/17 22:53

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
L35	859	("CW" continuous-wave (continuous adj wave)) near20 electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L36	1602605	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L37	147	L35 and L36	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L38	29384	third adj electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L39	9	L37 and L38	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L40	2575	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L41	169	L36 same L40	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L42	15	L22 and L41	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53

L43	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and (split\$4) and combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L44	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L45	5	L44 not L43	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L46	22	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and split\$4 and combiner and electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L47	17	L46 not (L43 L42)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L48	5	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) and electrode) and (transmit\$5 adj station) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L49	34500	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) near10 (convert\$4 electric\$3 signal wavelength wavelength (wave adj length))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L50	18941	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53

L51	2206	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L52	2904	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L53	1324	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L54	5	L53 and L51 and L52	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L55	3	(((((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) same split\$4 same combiner) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L56	68	(((((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53

		germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))				
L57	29	L50 and L56	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L58	22	(((((modulat\$5 ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide))) near5 (branch arm path)))) near10 ("group IV semiconductor" (group-IV- semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L59	7	L49 and (L58 L57 L55 L54)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L60	18941	((359/245,315,247,251- 252,254,108,237-238,278-279,290- 292,298,300-302) or (385/1-3,40,129- 132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L61	2295	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near20 ("group IV semiconductor" (group-IV- semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53



		telluride))				
L62	121492	bias\$3 near5 (electrode conduct\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L63	143	L61 and L62	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L64	54	L60 and L63	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L65	18941	((359/245,315,247,251- 252,254,108,237-238,278-279,290- 292,298,300-302) or (385/1-3,40,129- 132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L66	22	split\$4 same combiner same electrode same ("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L67	9	L65 and L66	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L68	2397	split\$4 same combiner same ("MZ interferometer" mach-zender mach- zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L69	2206	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L70	2904	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2011/11/17 22:53

			EPO; JPO; DERWENT; IBM_TDB			
L71	1	(L68 and L69 and L70) not L67	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L72	4589	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L73	2	(L69 and L70 and L72) not (L67 L71)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L74	1602605	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L75	13	L66 not (L73 L67 L71)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L76	6	("5524076") or ("5778113") or ("5991471").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L77	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L78	704	Franz-Keldysh	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L79	466	L74 and L78	US-PGPUB; USPAT;	OR	ON	2011/11/17 22:53

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
L80	161	L65 and L79	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L81	1	L69 and L70 and L80	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L82	20	(L73 L67 L71 L75 L76 L77) and (phase adj shift\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L83	737	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L84	3	L82 and L83	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L85	5208	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 (silicon near5 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L86	18941	((359/245,315,247,251- 252,254,108,237-238,278-279,290- 292,298,300-302) or (385/1-3,40,129- 132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L87	22	split\$4 same combiner same electrode same ("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53

L88	9	L86 and L87	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L89	2397	split\$4 same combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L90	2206	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L91	2904	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L92	1	(L89 and L90 and L91) not L88	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L93	4589	combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L94	2	(L90 and L91 and L93) not (L88 L92)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L95	13	L87 not (L94 L88 L92)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L96	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	OFF	2011/11/17 22:53

			DERWENT; IBM_TDB			
L97	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L98	1	(L94 L88 L92 L95 L96 L97) and L85	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L99	859	("CW" continuous-wave (continuous adj wave)) near20 electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L100	1602605	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L101	147	L99 and L100	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L102	29384	third adj electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L103	9	L101 and L102	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L104	2575	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L105	169	L100 same L104	US-PGPUB; USPAT; USOCR;	OR	ON	2011/11/17 22:53

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
L106	15	L86 and L105	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L107	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and (split\$4) and combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L108	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L109	5	L108 not L107	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L110	22	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and split\$4 and combiner and electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L111	17	L110 not (L107 L106)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L112	5	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L113	34500	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) near10 (convert\$4 electric\$3 signal wavelength wave-	US-PGPUB; USPAT; USOCR;	OR	ON	2011/11/17 22:53

		length (wave adj length))	FPRS; EPO; JPO; DERWENT; IBM_TDB			
L114	18941	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/17 22:53
L115	2206	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L116	2904	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L117	1324	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L118	5	L117 and L115 and L116	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L119	3	(((((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53

		telluride) (thallium adj germanium adj telluride))) same split\$4 same combiner) and electrode\$1				
L120	68	(((((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L121	29	L114 and L120	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L122	22	((((((modulat\$5 ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide)))) near5 (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L123	7	L113 and (L122 L121 L119 L118)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L124	52	L64 not (L112 L67 L71 L73 L75 L81 L82 L84 L98 L103 L106 L109 L111 L123)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L125	4	L124 and L83	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2011/11/17 22:53



			EPO; JPO; DERWENT; IBM_TDB			
L126	813376	((electro-optic\$3 (electro adj optic\$3) electrooptic\$3 photo (optic\$3 adj3 electric\$3) "optical/electrical") near5 (convert\$4 conversion)) "APD" "PD" photodiode photo-diode photodetect\$3 photo-detect\$3 (photo adj3 (diode detect\$3 avalanche)) optical-to-electrical avalanche-photodiode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L127	25	L124 and L126	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L128	25	L127 not (L112 L67 L71 L73 L75 L81 L82 L84 L98 L103 L106 L109 L111 L123)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L129	1	(L48 L3 L7 L9 L11 L17 L18 L20 L34 L39 L42 L45 L47 L59 L128 L125) and ((@ad>="20110902") (@pd>="20110902"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 22:53
L130	0	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same split\$4 same combiner same electrode).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/11/17 23:26
S1	17794	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 08:07
S2	189	split\$4 same combiner same electrode same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:10
S3	18	split\$4 same combiner same electrode same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2010/10/05 08:10

		(modulat\$5 adj (branch arm path))) same bias	DERWENT; IBM_TDB			
S4	8	S1 and S3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:11
S5	2212	split\$4 same combiner same ("MZ interferometer" mach-zender mach- zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:16
S6	1937	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:17
S7	2607	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:17
S8	0	(S5 and S6 and S7 and S1) not S4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:17
S9	1	(S5 and S6 and S7) not S4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:17
S10	4239	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:18
S11	2	(S6 and S7 and S10) not (S4 S9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:18
S12	1397207	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-	US-PGPUB; USPAT; USOCR;	OR	ON	2010/10/05 08:20

		guide (wave adj guide) (modulat\$5 adj (branch arm path)))	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S13	121	(S6 and S7 and S12) not (S11 S4 S9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:20
S14	40	S13 and S1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:20
S15	23106	combiner and split\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:20
S16	0	S14 and S15	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:21
S17	10	S3 not (S11 S4 S9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:21
S18	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 08:28
S19	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 08:38
S20	658	Franz-Keldysh	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:40
S21	431	S12 and S20	US-PGPUB;	OR	ON	2010/10/05

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			08:40
S22	143	S1 and S21	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:40
S23	1	S6 and S7 and S22	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:41
S24	19	(S11 S4 S9 S17 S18 S19) and (phase adj shift\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:43
S25	689	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:44
S26	3	S24 and S25	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:44
S27	4843	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 (silicon near5 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:03
S28	17794	((359/245,315,247,251- 252,254,108,237-238,278-279,290- 292,298,300-302) or (385/1-3,40,129- 132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 14:04
S29	18	split\$4 same combiner same electrode same ("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2010/10/05 14:04

		same bias	IBM_TDB			
S30	8	S28 and S29	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S31	2212	split\$4 same combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S32	1937	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S33	2607	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S34	1	(S31 and S32 and S33) not S30	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S35	4239	combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S36	2	(S32 and S33 and S35) not (S30 S34)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S37	10	S29 not (S36 S30 S34)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S38	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2010/10/05 14:04

			EPO; JPO; DERWENT; IBM_TDB			
S39	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 14:04
S40	1	(S36 S30 S34 S37 S38 S39) and S27	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S41	795	("CW" continuous-wave (continuous adj wave)) near20 electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:07
S42	1397207	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:08
S43	135	S41 and S42	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:08
S44	26546	third adj electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:08
S45	9	S43 and S44	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:08
S46	2452	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:40
S47	157	S42 same S46	US-PGPUB; USPAT;	OR	ON	2010/10/05 14:41

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S48	1	(S36 S30 S34 S37 S38 S39) and S47	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:41
S49	14	S28 and S47	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:41
S50	143	S47 not (S49 S48)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:57
S51	157	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:57
S52	0	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4) same (split\$4) same combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:58
S53	33	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4) and (split\$4) andcombiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:58
S54	6	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and (split\$4) and combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:59
S55	6	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2010/10/05 15:01

		adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same electrode	EPO; JPO; DERWENT; IBM_TDB			
S56	5	S55 not S54	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:01
S57	20	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path))) and ((electro- optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and split\$4 and combiner and electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:03
S58	15	S57 not (S54 S49)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:04
S59	0	S28 and S58	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:05
S60	139	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:08
S61	23106	combiner and split\$5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:09
S62	8	S60 and S61	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:09
S63	5	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station) and ((electro-optic\$3 (electro	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:12



		adj optic\$3) electrooptic\$3) adj convert\$4)				
S64	18313	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
S65	20	split\$4 same combiner same electrode same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S66	8	S64 and S65	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S67	2308	split\$4 same combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S68	2056	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S69	2742	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S70	1	(S67 and S68 and S69) not S66	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S71	4407	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S72	2	(S68 and S69 and S71) not (S66 S70)	US-PGPUB; USPAT; USOCR;	OR	ON	2011/03/25 22:36

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S73	1487017	("MZ interferometer" mach-zehnder (mach adj (zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S74	12	S65 not (S72 S66 S70)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S75	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
S76	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
S77	683	Franz-Keldysh	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S78	451	S73 and S77	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S79	154	S64 and S78	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S80	1	S68 and S69 and S79	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S81	19	(S72 S66 S70 S74 S75 S76) and	US-PGPUB;	OR	ON	2011/03/25

		(phase adj shift\$3)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			22:36
S82	715	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S83	3	S81 and S82	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S84	5009	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 (silicon near5 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S85	18313	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
S86	20	split\$4 same combiner same electrode same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S87	8	S85 and S86	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S88	2308	split\$4 same combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S89	2056	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2011/03/25 22:36

			IBM_TDB			
S90	2742	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S91	1	(S88 and S89 and S90) not S87	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S92	4407	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S93	2	(S89 and S90 and S92) not (S87 S91)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S94	12	S86 not (S93 S87 S91)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S95	6	(("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
S96	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
S97	1	(S93 S87 S91 S94 S95 S96) and S84	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S98	825	("CW" continuous-wave (continuous adj wave)) near20 electrode	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2011/03/25 22:36

			EPO; JPO; DERWENT; IBM_TDB			
S99	1487017	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S100	142	S98 and S99	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S101	27752	third adj electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S102	9	S100 and S101	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S103	2507	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S104	163	S99 same S103	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S105	15	S85 and S104	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S106	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and (split\$4) and combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S107	6	((("MZ interferometer" mach-zender	US-PGPUB;	OR	ON	2011/03/25

		mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same electrode	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			22:36
S108	5	S107 not S106	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S109	22	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path))) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and split\$4 and combiner and electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S110	17	S109 not (S106 S105)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S111	5	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S112	6	(S111 S66 S70 S72 S74 S80 S81 S83 S97 S102 S105 S108 S110) and ((@ad>="20101005") (@pd>="20101005"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
S113	736579	"group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:45
S114	1	S112 and S113	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2011/03/25 22:45

			IBM_TDB			
S115	2	("6744546").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:46
S116	0	S113 and S115	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:46
S117	2178	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:47
S118	1819	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:47
S119	1246	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:48

		telluride))				
S120	5	S119 and S68 and S69	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:48
S121	3	(((((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) same split\$4 same combiner) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:52
S122	67	(((((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:53
S123	28	S64 and S122	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:53
S124	0	(((((modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:55



		telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))				
S125	0	(((((modulat\$5 adj (branch arm path)))) near10 ("group IV semiconductor" (group-IV- semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:55
S126	0	(((((modulat\$5 adj (branch arm path)))) near10 ("group IV semiconductor" (group-IV- semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:56
S127	0	(((((modulat\$5 adj (branch arm path)))) near10 ("group IV semiconductor" (group-IV- semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:56
S128	1426	((((( (branch arm path)))) near10 ("group IV semiconductor" (group-IV- semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:56
S129	20	(((((modulat\$5 ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide)))) near5 (branch arm path)))) near10 ("group	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2011/03/25 22:58

		IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	DERWENT; IBM_TDB			
S130	6514	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) near10 convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:39
S131	33258	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) near10 (convert\$4 electric\$3 signal wavelength wave-length (wave adj length))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:40
S132	18313	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/26 08:41
S133	2056	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41
S134	2742	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41
S135	1246	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41

S136	5	S135 and S133 and S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41
S137	3	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) same split\$4 same combiner) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41
S138	67	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41
S139	28	S132 and S138	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41
S140	20	(((((modulat\$5 ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide))) near5 (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41

		telluride) (thallium adj germanium adj telluride)))) and electrode\$1				
S141	6	S131 and (S140 S139 S137 S136)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/26 08:41
S142	731	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:00
S143	1560762	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:01
S144	2449228	electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:01
S145	478	S142 and S143	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:01
S146	426460	bias\$3 near5 (electrode signal volt\$3 current charge circuit\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:04
S147	315	S145 and S146	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:05
S148	762046	"group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:05

		telluride)				
S149	50	S147 and S148	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:05
S150	24619	((peak-to-peak) (peak near5 peak) pk-pk ((minimum "min" minima lowest) near5 ("max" maximum maxima highest)) extrema) near5 amplitude	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:09
S151	1	S149 and S150	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:10
S152	18726	((359/245,315,247,251- 252,254,108,237-238,278-279,290- 292,298,300-302) or (385/1-3,40,129- 132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/26 11:11
S153	22	split\$4 same combiner same electrode same ("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S154	9	S152 and S153	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S155	2367	split\$4 same combiner same ("MZ interferometer" mach-zender mach- zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S156	2147	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S157	2844	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2011/08/26 11:11

			EPO; JPO; DERWENT; IBM_TDB			
S158	1	(S155 and S156 and S157) not S154	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S159	4521	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S160	2	(S156 and S157 and S159) not (S154 S158)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S161	1560762	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S162	13	S153 not (S160 S154 S158)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S163	6	(("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/26 11:11
S164	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/26 11:11
S165	699	Franz-Keldysh	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S166	461	S161 and S165	US-PGPUB; USPAT;	OR	ON	2011/08/26 11:11

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S167	159	S152 and S166	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S168	1	S156 and S157 and S167	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S169	20	(S160 S154 S158 S162 S163 S164) and (phase adj shift\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S170	731	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S171	3	S169 and S170	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S172	5136	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 (silicon near5 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S173	18726	((359/245,315,247,251- 252,254,108,237-238,278-279,290- 292,298,300-302) or (385/1-3,40,129- 132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/26 11:11
S174	22	split\$4 same combiner same electrode same ("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11

S175	9	S173 and S174	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S176	2367	split\$4 same combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S177	2147	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S178	2844	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S179	1	(S176 and S177 and S178) not S175	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S180	4521	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S181	2	(S177 and S178 and S180) not (S175 S179)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S182	13	S174 not (S181 S175 S179)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S183	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	OFF	2011/08/26 11:11



			DERWENT; IBM_TDB			
S184	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/26 11:11
S185	1	(S181 S175 S179 S182 S183 S184) and S172	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S186	853	("CW" continuous-wave (continuous adj wave)) near20 electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S187	1560762	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S188	145	S186 and S187	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S189	28795	third adj electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S190	9	S188 and S189	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S191	2560	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S192	168	S187 same S191	US-PGPUB; USPAT; USOCR;	OR	ON	2011/08/26 11:11

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S193	15	S173 and S192	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S194	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and (split\$4) and combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S195	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S196	5	S195 not S194	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S197	22	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and split\$4 and combiner and electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S198	17	S197 not (S194 S193)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S199	5	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S200	34044	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) near10 (convert\$4 electric\$3 signal wavelength wave-	US-PGPUB; USPAT; USOCR;	OR	ON	2011/08/26 11:11

		length (wave adj length))	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S201	18726	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/26 11:11
S202	2147	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S203	2844	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S204	1300	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S205	5	S204 and S202 and S203	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S206	3	(((((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11

		telluride) (thallium adj germanium adj telluride))) same split\$4 same combiner) and electrode\$1				
S207	67	(((((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S208	28	S201 and S207	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S209	22	(((((modulat\$5 ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide))) near5 (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S210	6	S200 and (S209 S208 S206 S205)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S211	49	S149 not (S199 S154 S158 S160 S162 S168 S169 S171 S185 S190 S193 S196 S198 S210)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:11
S212	2260	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2011/08/26 11:17

		adj (branch arm path)))) near20 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	EPO; JPO; DERWENT; IBM_TDB			
S213	10	S211 and S212	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:18
S214	266	S212 and S146 and S144	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:31
S215	262	S214 not (S199 S154 S158 S160 S162 S168 S169 S171 S185 S190 S193 S196 S198 S210)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:31
S216	0	S150 and S215	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:31
S217	86	S201 and S215	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/08/26 11:31
S218	18743	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/02 13:07
S219	2261	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near20 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:07

		germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))				
S220	24644	((peak-to-peak) (peak near5 peak) pk-pk ((minimum "min" minima lowest) near5 ("max" maximum maxima highest)) extrema) near5 amplitude	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:08
S221	4	S218 and S219 and S220	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:08
S222	120317	bias\$3 near5 (electrode conduct\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:09
S223	142	S219 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:09
S224	53	S218 and S223	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:09
S225	18743	((359/245,315,247,251- 252,254,108,237-238,278-279,290- 292,298,300-302) or (385/1-3,40,129- 132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/02 13:10
S226	22	split\$4 same combiner same electrode same ("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S227	9	S225 and S226	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2011/09/02 13:10

			EPO; JPO; DERWENT; IBM_TDB			
S228	2370	split\$4 same combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S229	2150	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S230	2848	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S231	1	(S228 and S229 and S230) not S227	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S232	4528	combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S233	2	(S229 and S230 and S232) not (S227 S231)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S234	1565240	("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S235	13	S226 not (S233 S227 S231)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S236	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT;	OR	OFF	2011/09/02 13:10

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S237	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/02 13:10
S238	699	Franz-Keldysh	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S239	461	S234 and S238	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S240	159	S225 and S239	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S241	1	S229 and S230 and S240	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S242	20	(S233 S227 S231 S235 S236 S237) and (phase adj shift\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S243	731	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S244	3	S242 and S243	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10



S245	5140	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 (silicon near5 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S246	18743	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/02 13:10
S247	22	split\$4 same combiner same electrode same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S248	9	S246 and S247	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S249	2370	split\$4 same combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S250	2150	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S251	2848	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S252	1	(S249 and S250 and S251) not S248	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S253	4528	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2011/09/02 13:10

			DERWENT; IBM_TDB			
S254	2	(S250 and S251 and S253) not (S248 S252)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S255	13	S247 not (S254 S248 S252)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S256	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/02 13:10
S257	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/02 13:10
S258	1	(S254 S248 S252 S255 S256 S257) and S245	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S259	855	("CW" continuous-wave (continuous adj wave)) near20 electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S260	1565240	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S261	146	S259 and S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S262	28843	third adj electrode	US-PGPUB; USPAT; USOCR;	OR	ON	2011/09/02 13:10

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S263	9	S261 and S262	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S264	2562	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S265	168	S260 same S264	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S266	15	S246 and S265	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S267	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path)))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and (split\$4) and combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S268	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path)))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S269	5	S268 not S267	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S270	22	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat\$5 adj (branch arm path)))) and ((electro- optic\$3 (electro adj optic\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2011/09/02 13:10

		electrooptic\$3) adj convert\$4)) and split\$4 and combiner and electrode	IBM_TDB			
S271	17	S270 not (S267 S266)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S272	5	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S273	34077	(electro-optic\$3 (electro adj optic\$3) electrooptic\$3) near10 (convert\$4 electric\$3 signal wavelength wavelength (wave adj length))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S274	18743	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)).OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/02 13:10
S275	2150	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S276	2848	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S277	1300	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10

S278	5	S277 and S275 and S276	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S279	3	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) same split\$4 same combiner) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S280	67	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S281	28	S274 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S282	22	(((((modulat\$5 ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide)))) near5 (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10

		telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1				
S283	6	S273 and (S282 S281 S279 S278)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S284	51	S224 not (S272 S227 S231 S233 S235 S241 S242 S244 S258 S263 S266 S269 S271 S283)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:10
S285	4	S284 and S243	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:17
S286	0	S284 and S220	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:18
S287	849652	((electro-optic\$3 (electro adj optic\$3) electrooptic\$3 photo) adj3 (convert\$4 conversion)) "APD" "PD" photodiode photo-diode photodetect\$3 photo-detect\$3 (photo adj3 (diode detect\$3 avalanche)) optical-to-electrical (optic\$3 adj3 electric\$3) "optical/electrical" avalanche-photodiode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:35
S288	37	S284 and S287	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:36
S289	803121	((electro-optic\$3 (electro adj optic\$3) electrooptic\$3 photo (optic\$3 adj3 electric\$3) "optical/electrical") near5 (convert\$4 conversion)) "APD" "PD" photodiode photo-diode photodetect\$3 photo-detect\$3 (photo adj3 (diode detect\$3 avalanche)) optical-to-electrical avalanche-photodiode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:41
S290	25	S284 and S289	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2011/09/02 13:41

			DERWENT; IBM_TDB			
S291	25	S290 not (S272 S227 S231 S233 S235 S241 S242 S244 S258 S263 S266 S269 S271 S283)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/09/02 13:42

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